**James River bacterial TMDL Implementation Plan First Steering Committee Meeting Summary**

Westover Hills Library
1408 Westover Hills, Boulevard
Richmond, VA 23225-3110
Wednesday, January 12, 2011, 1:00 PM - 3:00 PM

**1. Attending:**

Margaret Smigo DEQ TMDL coordinator and meeting facilitator
Keith Burgess, Monocan SWCD
Kemper Loyd, VDH
John Newton, Henrico County
Debbie Byrd, Goochland Co.
Sarah Stewart, RRPDC
Bob Steidel, City of Richmond
Hope Weaver, ACB Intern
Ram Gupta, DCR-RRO
David Bernard, Sierra Club & Coastal Canoeists
Ed Cronin, Greely & Hansen, for City of Richmond
Grace LeRose, City of Richmond
Chris French, ACB
Mark Alling, DEQ Piedmont office
Lorne Field, Chesterfield Environmental Eng.
Scott Flanigan, Chesterfield EE
Craig Lott, DEQ CO TMDL Coordinator

**Margaret Smigo provided a historical overview of the James River bacterial TMDL and IP to date and established 2 ground rules: No talking over each other and using a "Parking Lot" for any irresolvable topics for later resolution.**

The committee made introductions.

Ms. Smigo discussed the Four Goals of the Steering Committee:

1. To review all minutes and discussions made by Work groups
2. To make final decisions in IP development
3. To review progress of BMP installation over time
4. To review future water sampling results

There were three work groups: Government/urban, residential, and agricultural. First WG meetings occurred 11/16/2010, second formal meetings occurred December 9 and 13, 2010. All minutes are posted online.

Mr. Gupta summarized the Agricultural workgroup activity to date. See the First Steering Committee meeting – Summary of Agricultural Working Group meetings

document dated 1/12/2011, attached, for details. Mr. Burgess added that he is still checking livestock numbers for Goochland and Powhatan Counties.

Ms. Smigo stated there would be no updated population / cost handouts for this meeting because the numbers are still changing almost daily. Final such handouts will be provided at the second Steering Committee meeting.

Ms. Smigo summarized the Residential workgroup activity to date. See the First Steering Committee meeting – Summary of Residential Working Group meetings document dated 1/12/2011, attached, for details. Ms. Smigo noted that the WG wanted Stormwater BMPs in all watersheds of the TMDL including those without CSOs.

Mr. Steidel stated there are no City code restrictions on installing green roofs, but there are on grey water use. Mr. French stated there were inconsistencies between localities regarding the permitting and installation of rainwater harvesting cisterns due to local interpretations of health and building codes. A group spearheaded by the Rivanna River Basin Commission and the Thomas Jefferson Soil & Water Conservation District is currently working with state agencies to address the matter so there is statewide consistency for permitting cistern systems.

Ms. Smigo stated that septic failure rates are hard to count, as well as how the numbers of straight pipes. Mr. Flanigan stated that Chesterfield Co. was doing digital mapping of septic failure and using VDH data to see where failures exist. All types of failures were considered one category. Multiple areal grouping popped up. This also showed proximity of septic failure groupings to municipal hookups and surface waters.

Mr. Steidel asked who pays in Chesterfield Co.? Mr. Flanigan replied that all residents pay $3500 to connect to municipal sewer regardless of length to sewer line. Staff found some failures with sewer hookup in front of the home. There are no rules to require hookup in Chesterfield Co.

Mr. Steidel asked if county condemns failed septic properties. Mr. Flanigan did not know, that was a VDH issue, but that people have not been cleared out of homes.

Ms. Smigo stated sometimes hookup cost varies by radius to hookup.

Ms. LeRose asked if the cheapest cost is at the connection point.

Mr. Flanigan stated Chesterfield Co. made maps of the sewer failure groupings.

Mr. Loyd stated that STPs may be overwhelmed with excess flow with many more hookups.

Mr. Bernard stated that Austin TX pet waste program information is interesting, and past around a handout. It is a comprehensive 10 year old program. There are posters in Vet

offices recommended by the Sierra Club. Such posters already designed could save design costs for this IP.

Ms. Smigo stated that pet waste composter construction involved plastic drums put in the ground, but it is unknown if they are used correctly after installation. These were included in the pet waste IP analysis but the group questioned their efficiency.

Mr. Lott summarized the Government / Urban workgroup activity to date. See the James River Bacterial TMDL Implementation Plan Government / Urban Work Group Meetings (1 & 2) Highlights document, attached, for details. He stated that DEQ got all stormwater data and bacterial BMP efficiency data from localities. MapTech is working with the data.

Mr. Steidel noted differences between the Lynchburg and Richmond CSO situations.

Mr. Lott stated that efficiency data and cost/efficiency comparisons are real issues for local governments. These data need to be created at the local level. The WGs will recommend BMPs using the EPA International efficiency database.

Mr. Cronin stated there may not be a translator between nutrient BMP efficiency and bacterial efficiency. Greely and Hanson summarized efficiency rates for BMPs and will forward this information to the groups. Mr. Alling and Mr. Burgess will discuss monitoring on the cattle farm on Bernards Creek downstream of Robious Rd. DEQ asked permission from the owner to monitor on the farm and await a decision. Mr. Burgess talked with the owner about BMP programs. The Bernards Creek station at Rt. 711 was added for monitoring in 2011 bimonthly.

Mr. Lott stated that DEQ is still considering including the earlier Tuckahoe Creek bacterial TMDL in this IP. MapTech is still evaluating also. Ms. Smigo stated that the committee will need DEQ's decision by the end of January work group meetings to be able to include Tuckahoe Creek in this IP.

Mr. Steidel stated that if Tuckahoe Creek is not included in the IP, the City will do a Source Water Protection Plan because Tuckahoe Creek is a source for the City drinking water.

Ms. Maggard by phone addressed activity by each WG. For the agricultural WG she thanked all for improved livestock information, which changed the NPS BMP needs. MapTech had a lot of WG questions to answer. She said there will be no livestock BMOPs in the urban watersheds. The land use reduction percents are changing daily due to so many updates. Five sections of the IP with a map plus land use will be available for the next WG meetings.

For the residential WG, Ms. Maggard noted a lot of questions on riparian buffer locations, what streams, whether costs were per foot or per acre. MapTech has septic system repair data. All the changes will be in the next WG handout. The City said they

have no livestock reduction, but the James riverine has city reductions for other non-ag BMPs. For [pet education, whether its bags, refills, signs, at community events, vets, SPCAs, hunt clubs, flyers, billboards; this can be done any way the group wants it, just write it into the plan. Pet waste reduction comes from actual pet waste pickups, so pickups are needed for bacteria improvements. This will be included in the next handout. Ms. Smigo will also have slides on this.

For the government/urban WG , Ms. Maggard stated that for LID BMPs she added efficiencies to the table from the ACB submittals; there is always a range of efficiencies and they are not gross efficiencies. There are variable efficiency results. She did not update costs because she received no updated costs. Ms. Maggard stated she received no data from Goochland Co. however Ms. Smigo has this. MapTech will add it for the next WG meeting. MapTech needs the maximum acres that could be treated by green roofs, rain barrels, and permeable pavement to see changes of needs. She cannot promise this will be done by the next WG meeting.

Mr. French asked for clarification on the modeled BMPs. Ms. Maggard stated that MapTech would model three BMPs(green roofs, rainbarrels, and permeable pavement) to translate those removal efficiencies (both stormwater volume reduction and bacteria) to rain gardens and other LID/Stormwater BMPs. Ms. Maggard stated MapTech was using green roofs for large buildings and rain barrels for small buildings. MapTech needs to know the maximum area of impervious surface to remove by green roofs.

Ms. Smigo asked Ms. Maggard to explain how this modeling will be done through a forthcoming handout.

Mr. Lott summarized changing pervious to impervious is doable, but accurate efficiencies are harder. Once all changes to pervious are made, what can be done otherwise with BMPs?

Ms. Byrd stated that green roofs can only economically be done on new buildings because retrofitting green roofs is too expensive, so why even include green roof changes to current buildings, because this will not happen. She stated it would be more effective to make a field BMP over a larger area for a cheaper price than to do a green roof.

Mr. Cronin stated green roofs cost $200,000 / acre, the most expensive BMP. Mr. French agreed that raingardens are much more cost-effective BMPs because they are less expensive and can be designed to accept large water volumes provided adequate installation space is available.

Mr. Lott also explained that acres changed to one or another BMP ultimately will be decided by the WGs and Steering committee, and a lot depends upon hydrology.

Mr. Cronin stated that the need to understand efficiency, cost, liabilities and limitations of BMP technologies, and wants to discuss this at the next gov't / urban WG meetings.

Ms. Byrd wanted a figure to look at showing roofs staying impervious, and considering what type of landuse area BMP efficiencies will be needed to counteract not changing buildings to green roofs. She continued that roof top conversion will not be made, so we should look at pervious areas that could be improved to counteract leaving rooftops alone, for example, to see what reductions retention ponds, swales, etc, are needed to overcome not changing roofs.

Ms. Maggard discussed the James subwatershed 6 delisted scenario done at the city's request. The city contacted Jim Kern of MapTech asking for further refinement before modeling. Please see the attached handout distributed at the meeting.

Mr. Cronin stated he wanted to see where we are with the James remodeled and then decide how to form new scenarios, and said he will discuss this at the next WG meeting. Ms. Maggard and Mr. Cronin spent time discussing this and trying to understand each other and seemed to come to agreement.

Mr. Cronin explained to the committee that he wants to take a step back to evaluate the difference between the geometric mean standard and the remodeled geometric mean result, to show what happened with the delisting. This would be important if the delisting dropped the percent reduction down to 30%, and would show how much less BMPs for urban stormwater were needed in the upper watersheds.

Ms. Maggard discussed the Reedy Creek re-modeling, explaining per the handout provided, and also discussed optical brightener data regarding human bacteria impacts. Please see the attached handout distributed at the meeting.

Ms. LeRose asked whether other watersheds were re-evaluated and their bacteria results went down, while Reedy's went up. It was explained that the Reedy remodeling occurred because more recent citizen and DEQ data from the upper parts of the watershed were collected and remodeled. None of the other watersheds had needed such remodeling. She asked if BST needed to be evaluated for the newer Reedy Creek data to be useful. Ms. Maggard explained that was not the case.

Ms. LeRose stated that two samples at stations RC3 and RC4 in 2010 occurred while a sewer line break was present, were these included?

Mr. Bernard asked whether pet waste bags decompose in the environment. Committee members related they were aware of biodegradable pet waste bags, for example those used in Nags Head, NC are made of corn products. He also asked what other breakdown occurs from old asphalt shingle roofs. This was put in the parking lot for later. Mr. Lott stated that EPA List Serve may answer these questions.

Ms. Smigo in response to a former comment by the City stated that the IP has a firm deadline of June 30 for a finished product, and to stay on schedule for that, the next steering committee meeting needs to occur in the first week of March. She suggested dates that week. She asked for location for the meeting and offered the DEQ

headquarters or Piedmont Regional Offices. She reminded the committee that the next ag and residential WG meetings were on 1/24 and the next govt / urban WG meeting was on 1/26 at the Henrico Co. Offices at 10AM.

Mr. French stated that we should be cautious about focusing on bacterial BMP efficiencies when deciding potential options for LID BMPs, as many are designed to reduce stormwater volume. He understood the model determines stream flows and corresponding bacterial loads based on those flows. Any BMP that reduces flows to an impaired stream should have a positive effect in reducing bacterial loads from the landscape. He asked if flow reductions from LID BMPs are reflected in the implementation model scenarios.

Mr. Field asked if non-CSO localities "get credit" for rain barrels. Mr. Lott explained that the TMDL determined that stormwater volume reduction was needed to help meet bacteria water quality standards in two CSO impacted watersheds, Gillie and Almond Creeks. Rainbarrels effectively reduce stormwater volume. Therefore they would not be a required BMPs in the non-CSO watersheds, but they would reduce stormwater volume and thus also bacteria load to a degree in those watersheds, and could certainly be recommended and useful there.

Parking Lot issues:
Stormwater BMP issues
Asphalt shingle roof contaminants.